

In re Application of: Noam EGOZI  
Serial No.: 10/526,428  
Filed: February 28, 2005

Examiner: Sanjay CATTUNGAL  
Group Art Unit: 3768  
Attorney Docket: 39878

### REMARKS

This Application is a US National Phase Application of PCT Patent Application No. PCT/IL2003/000707 having International Filing date of August 28, 2003. The US National Phase Application has been assigned Serial Number 10/526,428, and has been filed on February 28, 2005.

Claim 32 has been amended herewith. New claims 54-72 has been added herewith.

The Application now comprises, after amendments claims 1-72, of which claims 1, 41, 44, 51 and 53 are in independent form.

Support for the claim amendments is presented below, with reference to the paragraph numbers in the published National Phase Application, US Patent Application Publication No. 2006/0020208.

The amendment in claim 32, adding respiratory capacity as an alternative or additional physiological parameter to respiratory rate, is supported, for example, by paragraph 0082, which states, "Alternatively or additionally, other physiological parameters and/or changes therein...may be determined from the sensed signal, for example...respiratory rate, possibly an indication of respiratory capacity or changes therein..."

New claims 54-58 are supported, for example, by paragraph 0104, which describes different wavelength ranges and their suitability for the purposes stated in claims 54-58.

New claim 59, determining the respiration rate from a measured systolic wave, is supported, for example, by paragraph 0084, which states, "the respiratory rate is also available from the measured wave...the systolic wave is a modulation of a respiratory wave...Suitable spatial filtering of the sensed signal will provide the respiratory rate."

In new claim 60, using a pulse form, a cardiac output, a blood flow rate, and a blood volume as the physiological parameter are all supported, for example, by paragraph 0009. Using a blood pressure is supported, for example, by paragraph 0086, and using a systemic vascular resistance is supported, for example, by paragraphs 0082 and 0085.

New claim 61, using local blood flow rate to an organ to estimate a change in a physiological condition of a the body as a whole, is supported, for example, by

paragraph 0083, which states, "While a complete cardiac output requires monitoring all the blood flow, for example at the aorta, changes in the flow to an organ, such as the hand, may correlate with various physiological conditions, such as reduced cardiac output, shock, or extreme exercise."

New claim 62, user selection of physiological parameters, is supported, for example, by paragraph 0087, which states, "In some embodiments of the invention, detection device 100 allows a user to select the physiological parameters that will be analyzed..."

New claim 63, displaying the selected physiological parameters, is supported, for example, by paragraph 0088, which states, "the user can select, which parameter or parameters will be displayed..."

New claim 64, estimating a growth rate of bubbles, is supported, for example, by paragraph 0005, which states, "analysis of the perturbations allows determining the size, rate of growth and/or concentration of the gas bubbles..."

New claim 65, using the method under water, in the air, and in outer space, is supported, for example, by paragraph 0009. Use under water and in outer space is also supported by paragraph 0115.

New claim 66, estimating a physiological state in the air or in outer space, is also supported, for example, by paragraph 0009.

New claim 67, using a change in the physiological state to predict problems during a dive, and to indicate where certain action should be taken or is imminent, is supported, for example, by paragraphs 0010 and 0087. Paragraph 0010 states, "the gauge is used to provide real-time physiological feedback, for example, underwater...Possibly, the gauge learns the progression pattern...and uses this pattern to predict problems in a dive." Paragraph 0087 states, "device 100 may be used to monitor physiological parameters of the body and indicate where certain action, such as pausing ascent in diving, should be taken or is imminent."

New claim 68, which states that the change in the physiological state comprises one or more of appearance of bubbles, reduction in cardiac output, and increase in stress, is supported, for example, by paragraphs 0087 and 0089. Paragraph 0087 states, "device 100 [relies] at least in part on actual physiological measurements, such as detection of bubbles or reduction in cardiac output..." Paragraph 0089 also mentions stress, in this regard.

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New claim 69, adapting the prediction of problems during diving to a person doing the diving, based on a real-time response of the person, is supported, for example, by paragraph 0010, which states, "Possibly, the gauge learns the progression pattern for a person...and uses this pattern to predict problems in a dive. In one embodiment, a statistical progression is calibrated...based on the real-time response of the person doing the activity."

New claim 70, estimating a physiological state using multiple measured parameters, taking into account the interaction of the parameters, is supported, for example, by paragraph 0089, which states, "Stress is just one example of states that can be defined based on the interaction of multiple parameters and/or integration of multiple parameters. In particular, it is noted that changes in one parameter may modify the meaning of other parameters..."

New claim 71, transmitting through air, and new claim 72, transmitting through clothing, are supported, for example, by paragraph 0111, which states, "Measurement through the air is also possible for some wavelengths...for some types of materials and/or wavelengths, measurement through clothes is also possible."

An early and favorable action is respectfully requested.

Respectfully submitted,



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